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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,364	06/23/2003	Mark Barrow	14795	1247
293 7590 03/13/2008 Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave Suite 406 Alexandria, VA 22314				
EXAMINER				
NGUYEN, CAM N				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
03/13/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/601,364

Applicant(s)

BARROW ET AL

Examiner

Cam N. Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/12/07 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicants' amendment and remarks, filed December 12, 2007, has been made of record and entered. Claims 1-5, 13, & 17 have been amended. Claims 21-41 have been canceled.

Claims 1-20 are currently pending.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

In the last line of the claim, the “ should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 102(b)/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barrow et al., "hereinafter referred to as Barrow", (US Pat. 5,585,136).

Barrow discloses the claimed composite sol gel formulation, wherein the selected ceramic powders, having particle diameter of from 0.1 microns to 10 microns in size, are added at the loadings of 5 - 90% by weight to the organo-metallic solutions prepared from organic metal precursors by a sol gel process (see col. 3, ln 13- col. 4, ln 7). The ceramic powders may be selected from a wide range of materials including alumina, silica, titania, zirconia, silicon carbide, titanium carbide, and PZT (see col. 4, ln 7-9 & also Table 1). The films of greater than 5 um and up to at least 200 um in thickness can be applied by spin coating multiple layers (see col. 4, ln 42-44).

Product-by-Process limitations in the claims have been noted. While the composite sol gel of the reference might not be made by the same process, the composite sol gel disclosed is the same as being claimed. It has been held that the patentability of the product and its method of production are separately determined. Thus, even though the process limitations in the claims are not disregarded, they have no bearing on the patentability of the claims product per se. See In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985); In re Brown, 173 USPQ 688, 688 (CCPA 1977); In re Fessman, 180 USPQ 324, 326 (CCPA 1977). See also *MPEP 2113*.

There is no patentable distinction seen between the claimed composite gel formulation and that disclosed by Barrow. Thus, the claims are anticipated by the teaching of reference.

Response to Applicants' Arguments

5. Applicants' remarks filed on December 12, 2007 and June 25, 2007 have been fully reconsidered, but not deemed persuasive because of the following reasons.

First, applicants urged, that "the convention polymeric sol-gel, such as that disclosed in Barrow et al., form a polymerized gel structure on deposition that is comparably dense and continuous. On drying and firing, this gel network formed from conventional sol-gel binders is strained and cracks at some maximum thickness for a given substrate." (applicants' response 06/25/07 on page 6, second to the last paragraph). This is not persuasive because the composite material disclosed by Barrow et al. is a stable crack-free material, having the same coating thickness, and stable at a heat treating temperature of up to 1000°C (see col. 10, claim 14, step (f) and also claims 15-18). It is considered that applicants does not provide sufficient evidence to support their argument that the sol-gel material disclosed in Barrow et al. is a dense and continuous.

Applicants' other arguments regarding "adjustment of the acid ratio" has also been noted. The arguments are not found persuasive because the instant claims are called for a composite sol-gel, which is a product and not a process of preparing the composite sol-gel. Thus, the arguments regarding the process of making the composite sol-gel, such as the adjustment of the acid ratio of the claimed invention or any other process steps difference between the claimed invention and the disclosed is not persuasive.

It is considered the Barrow et al. reference is still an applicable prior art because it clearly teaches the claimed composite sol-gel product and the product properties as required by

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applicants in the instant claims. The claimed product structure and the disclosed structure are not seen different from each other. The rejection is therefore maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Claims 1-20 are pending. Claims 1-20 are rejected. No claims are allowed.

Contacts

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is

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571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Nguyen/cnn

Primary Examiner

March 03, 2008

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